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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

of 10

APPLICATION NO.: 10/627,331

ATTY. DOCKET NO.: C1039.70078US00

FILING DATE:

July 25, 2003

CONFIRMATION NO.: 4362

APPLICANT:

Arthur M. Krieg, et al.

GROUP ART UNIT: 16372 1644

EXAMINER: Not yet assigned Emily M. C-C

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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

Sheet 3 of 10

APPLICATION NO.: 10/627,331 ATTY. DOCKET NO.: C1039.70078US00

APPLICATION NO.: 10/627,331 ATTY. DOCKET NO.: C1039.70078US00

FILING DATE: July 25, 2003 CONFIRMATION NO.: 4362

APPLICANT: Arthur M. Krieg, et al.

GROUP ART UNIT: 1632 648

EXAMINER: Not yet assigned Examiner: Not yet

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

of

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 APPLICATION NO.: 10/627,331
 ATTY. DOCKET NO.: C1039.70078US00

 FILING DATE:
 July 25, 2003
 CONFIRMATION NO.: 4362

APPLICANT: Arthur M. Krieg, et al.

GROUP ART UNIT: 1632 1644 EXAMINER: Nor yet assigned Enily M. C

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	RMATION I			FILING DATE:	July 25, 2003	CONFIRMATION NO.: 4362
STAT	FEMENT BY	APF	PLICANT	APPLICANT:	Arthur M. Krieg, e	et al.
Sheet	5	of	10	GROUP ART UNIT:	1692/1648	EXAMINER: Not yet assigned Finity M. Co.

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APPLICATION NO.: 10/627,331

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APPLICANT:

Arthur M. Krieg, et al.

GROUP ART UNIT: 1552/648

EXAMINER: Not yet assigned

OTHER ART - NON PATENT LITERATURE DOCUMENTS Examiner's Cite Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item Translation Initials No (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s). (Y/N) publisher, city and/or country where published. KLINMAN DM et al., CpG motifs present in bacteria DNA rapidly induce lymphocytes to secrete interleukin 6, interleukin 12, and interferon gamma. Proc Natl Acad Sci USA (1996) 93(7):2879-83. KLINMAN, D. et al., Immune Recognition of Foreign DNA: A Cure for Bioterrorism?, Immunity (1999) 11:123. KLINMAN, D. M. et al., "Repeated administration of synthetic oligodeoxynucleotides expressing CpG motifs provides long-term protection against bacterial infection. Infect Immun 67:5658-5663, KLINMAN, D. M., Kamstrup, S., Verthelyi, D., Gursel, I., Ishii, K. J., Takeshita, F., and Gursel, M. Activation of the innate immune system by CpG oligodeoxynucleotides: immunoprotective activity and safety. Springer Semin Immunopathol 22:173-183, 2000. KRIEG, A. M., et al., "CpG DNA induces sustained IL-12 expression in vivo and resistance to Listeria monocytogenes challenge." J Immunol 161:2428-2434, 1998. KRIEG, CpG Motifs in Bacterial DNA and Their Immune Effects, Annu. Rev. Immunol. (2002) 20:709 KRIEG AM et al. A Role for Endogenous Retroviral Sequences in the Regulation of Lymphocyte Activation, Journal of Immunology, Vol. 143, 2448-2451, 1989 KRIEG AM et al, The role of CpG dinuleotides in DNA vaccines, Trends in Microbiology, Vol. 6, pp. 23-27, Jan 1998. KRIEG AM et al, Phosphorothioate Oligodeoxynucleotides: Antisense or Anti-Protein?, Antisense Research and Development, (1995), 5:241 KRIEG AM et al., CpG DNA: A Pathogenic Factor in Systemic Lupus Erythematosus?, Journal of Clinical Immunology, (1995) 15:6:284-292 KRIEG AM et al., CpG motifs in bacterial DNA trigger direct B-cell activation. Nature 374:546-9. KRIEG AM et al., Leukocyte Stimulation by Oligodeoxynucleotides, Applied Antisense Oligonucleotide Technology, (1998), 431-448 KRIEG AM et al., Modification of antisense phosphodiester oligodeoxynucleotides by a 5' cholesteryl moiety increases cellular association and improves efficacy, Proc. Natl. Acad. Sci., (1993), 90:1048-1052. KRIEG AM et al., Oligodeoxynucleotide modifications determine the magnitude of B cell stimulation by CpG motifs. Antisense Nucleic Acid Drug Dev (1996) 6(2):133-9. KRIEG AM et al., Uptake of oligodeoxyribonucleotides by lymphoid cells is heterogeneous and inducible. Antisense Res Dev (1991) 1(2):161-71. KRIEG AM, An innate immune defense mechanism based on the recognition of CpG motifs in microbial DNA. J Lab Clin Med (1996) 128(2):128-33. KURAMOTO et al., Oligonucleotide Sequences Required for Natural Killer Cell Activation, Jpn. J. Cancer Res., (1992) 83:1128-1131. LAGRANGE et al., Immune Responses Directed Against Infectious and Parasitic Agents, Principle. Types of Immune Responses. LEONARD et al., Conformation of Guanine 8-Oxoadenine Base Pairs in the Crystal Structure of d(CGCGAATT(08A)GCG), Biochemistry (1992) 31(36):8415-8420. LIPFORD G. B. et al. "Immunostimulatory DNA: sequence-dependent production of potentially harmful or useful cytokines." Eur J Immunol 27:3420-3426, 1997. MACFARLANE DE and Manzel L, Antagonism of immunostimulatory CpG-oligodeoxynucleotides by quinacrine, chloroquine, and structurally related compounds. J Immunol (1998) 160(3):1122-31. MANZEL L and Macfarlane DE, Lack of Immune Stimulation by Immobilized CpG-oligonucleotide. Antisense & Nucleic Acid Drug Development, (1999) 459-464.

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Sheet 7 of 10

APPLICATION NO.: 10/627,331 ATTY. DOCKET NO.: C1039.70078US00

APPLICATION NO.: 10/627,331 ATTY. DOCKET NO.: C1039.70078US00

FILING DATE: July 25, 2003 CONFIRMATION NO.: 4362

APPLICANT: Arthur M. Krieg, et al.

GROUP ART UNIT: 1532/648

EXAMINER: Not yet assigned

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INFORMATION DISCLOSURE	FILING DATE:	July 25, 2003	CONFIRMATION NO.: 4362	
STATEMENT BY APPLICANT	APPLICANT: Arthur M. Krieg, et al.			
Sheet 8 of 10	GROUP ART UNIT:	1652 1648	EXAMINER: Not yet assigned Foul M. C	

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INFORMATION DISCLOSURE	FILING DATE: July 25, 200	03 CONFIRMATION NO.: 4362
STATEMENT BY APPLICANT	APPLICANT: Arthur M. I	Krieg, et al.
Sheet 9 of 10	GROUP ART UNIT: 1632 164	EXAMINER: Not yet assigned

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INFORMATION DISCLOSURE	FILING DATE: July 25, 2003	CONFIRMATION NO.: 4362
STATEMENT BY APPLICANT	APPLICANT: Arthur M. Krieg	, et al.
Sheet 10 of 10	GROUP ART UNIT: 1692/448	EXAMINER: Not yet assigned Emily M. Ce

Examiner's	Cite	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item	Translation
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[NOTE - Must provide a copy of any patent, publication, other information listed, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]

^{*} a copy of this reference is not provided as it was previously cited by or submitted to the office in one of the following prior applications, Serial No. <u>08/386.063</u>, filed <u>02/07/95</u>, Serial No. <u>08/738,652</u>, filed <u>10/30/96</u>, Serial No. <u>08/960,774</u>, filed <u>10/30/97</u>, Serial No. <u>09/630,319</u>, filed <u>7/2/2002</u> relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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APPLICATION NO.: 10/627,331 ATTY. DOCKET NO.: C1039.70078US00

FILING DATE: July 25, 2003 CONFIRMATION NO.: 4362

APPLICANT: Arthur M. Krieg, et al.

GROUP ART UNIT: 1648 EXAMINER: Emily Le

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				FILING DATE:	July 25, 2003	CONFIRMATION NO.: 4362
STAT	EMENT BY	APP	LICANT	APPLICANT:	Arthur M. Krieg, et	al.
				GROUP ART UNIT:	1648	EXAMINER: Emily Le
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STAT	EMENT BY	APP	LICANT	APPLICANT:	Arthur M. Krieg, et	al.		
				GROUP ART UNIT:	1648	EXAMINER: Emily Le		
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#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[NOTE - Must provide a copy of any patent, publication, other information listed, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]

^{*} a copy of this reference is not provided as it was previously cited by or submitted to the office in one of the following prior applications, Serial No. 08/386,063, filed 02/07/95, Serial No. 08/738,652, filed 10/30/96, Serial No. 08/960,774, filed 10/30/97, Serial No. 09/630,319, filed 7/31/00, or Serial No. 10/187,489, filed 7/2/2002 relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).